

# Figure 1

## Gene and AA sequence

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      M L G K F S Q T C Y N S A I Q G S V L T S T C E R T N G G
1 AGGAGGACAG CTATGCTGGG CAACTTCAGC CAGACCTGCT ACAACAGCGC GATTCAGGCG AGCGTTCTGA CCAGCACCTG CGAACGTACC AATGCTGGCT
  TCCTCCTGTC GATACGACCC GTTCAAGTCG GTCTGGACGA TGTTCGCGG CTAAGTCCCG TCGCAAGACT GGTGCTGGAC GCTTGCATGG TTACCACCGA

      Y N T S S I D L N S V I E N V D G S L K W Q P S N F I E T C R N T Q
101 ACAACACTTC TAGCATGTAT CTGACACGCG TGATTGAGAA TGTGGATGGC TCTCTGAAT GGCAGCCGAG CAACTTCATT GAAACCTGTC GCAACACCCA
  TGTGTGTAAG ATCGTAACTA GACTTGTCGC ACTAACTCTT ACACCTACCG AGAGACTTTA CCGTCGCGTC GTTGAAGTAA CTTTGGACAG CGTTGTGGGT

      L A G S S E L A A E C K T R A Q Q F V S T K I N L D D H I A N I D
201 GCTGGCGGCG AGCTCTGAAC TGGCGGCAGA ATGCAAGACT CGCGGCGAGC AGTTGTGTAG CACCAAGATC AACCTGGAGC ATCACATCGC GAACATTGAT
  CGACCGCGCG TCGAGACTTG ACCGCCGTCT TAGGTTCTGA GCGCGCGTGC TCAAACACTC GTGTTCTAG TTGGACCTGC TAGTGTAGCG CTTGTAACTA

      G T L K Y E #
301 GGCACCCCTGA AGTATGATA A
  CCGTGGGACT TCATACTTAT T

```

# Figure 2

## AA alignment

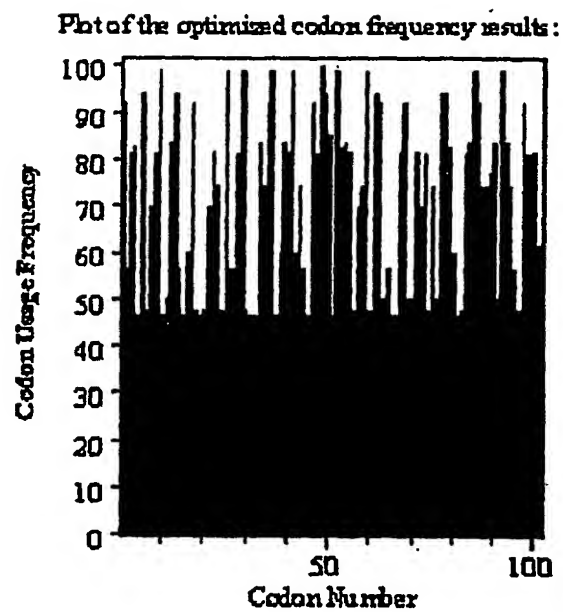
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      |||||||
      MLGKFSQTCYN SAIQGSVLTSTCER TNGGYNTSSIDL NSVIENV D GSLKWQPSNFI 56

      ETCRNTQLAGSSS ELAAECKTR AQQFVSTKINLDDHIANIDGTLKYE* 101
      |||||||
      ETCRNTQLAGSSS ELAAECKTR AQQFVSTKINLDDHIANIDGTLKYE* 102

```

## Figure 3



## Figure 4

1 atccggatat agttcctcct ttacgcaaaa aacccctcaa gaccggtta gaggcccaa  
 61 ggggttatgc tagttattgc tcagcgggtg cagcagccaa ctacagctcc ttccgggctt  
 121 tgttagcagc cggatctcag tgggtgggtt ggtgggtcgc gacatccctg gggcttccg  
 181 gggcgagttc tggctggcta gcccgtttga tctcaggtt ttatctcttc aggtgccaat  
 241 caatgttccg gatgtatcgc tccaggttga tcttgggtct cacaactcgc tgcgcgcgag  
 301 tcttgatcgc tgcgcgcgag tccaggttga tcttgggtct cacaactcgc tgcgcgcgag  
 361 tgaagtgtct cggctgccaat ttacagagagc catccacatt ctcacatcgc ctgttcagat  
 421 caatgttccg gatgtatcgc tccaggttga tcttgggtct cacaactcgc tgcgcgcgag  
 481 cctgaatcgc ggtgtgtgag caggtctggc tgaactgccc caggtatgt atatctcct  
 541 cttaaagtta acaaaaatta ttctagagg ggaattgtta tccgtcaca attccctat  
 601 agtgatcgt attaatctgc cgggatcgag atctcgatcc tctacgccg acgcatcgtg  
 661 gccggcatca cggcgccac aggtgcggtt gctggcgctt atatcgcca catcacgat  
 721 ggggaagatc gggctcgcca ctccggctc atgagcgctt gttcggcgt gggtatggg  
 781 gcaggcccg tggccggggg actgttggg gccatctcct tgcattgacc attccttgcg  
 841 gcggcggtgc tcaacggcct caactacta ctgggtgct tctaatgca ggagtgcgt  
 901 aaggagagc gtcgagatcc cggacacat cgaatggcg aaaaccttc gcggtatggc  
 961 atgatagcgc ccggaagaga gtcaattcag ggtgtgaat gtgaaccag taacgttata  
 1021 cgatctgca gagtatgccg gtgtctctta tcagaccgtt tcccgcgtgg tgaaccaggc  
 1081 cagccacgtt tctcgaaaa cgcgggaaaa agtggaagcg gcgatggcg agctgaatta  
 1141 cattcccaac cgcgtggcac acaactggc gggcaaacag tctgtctga ttggcgttc  
 1201 cactccagt ctggccctgc acgcgccgc gcaattgtc gcggcgatta aatctcgcc  
 1261 cgatcaactg ggtgccagcg tgggtgtgc gatggtaga cgaagcggcg tgaagcctg  
 1321 taaagcggcg gtgcacaatc ttctcgcgca acgcgtcagt gggctgatca ttaactatc  
 1381 gctggatgac caggatgcca ttgctgtgga agctgcctgc actaatgttc cggcgttatt  
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 1501 gcgactgggc gtggagcatc tggctgcatt gggtcaccag caaatcgcc tgttagcggg  
 1561 cccattaagt tctgtctcgg cgcgtctcgc tctggctggc tggcataaat atctactcg  
 1621 caataaatt cagcgatag cggaaacggga aggcgactgg agtgccatgt cgggtttca  
 1681 acaaacatg caaatgtga atgagggcat cgttccact cgcgtctgg ttgccaacga  
 1741 tcagatggcg ctggcgcaa tgcgcgcat taccagatcc gggctgcgcg ttggtcgga  
 1801 tatctcgga gtgggatac acgatacga agacagctca tgtatatcc cggcgttaac  
 1861 caccatcaa caggatttc gcctgctgg gcaaaccagc gtggaccgt tctgcaact  
 1921 ctctcagggc caggcgtga agggcaatca gctgtgccc gtctcactgg tgaagaaaa  
 1981 aaccacctg gcgccaata cgcgaaccgc ctctccccc gcgttggccg attcattaat  
 2041 gcagctggca cgcaggttt cccgactgga aagcggcgag tgagcgcaac gcaattaatg  
 2101 taagttagct cactcattag gcaccgggat ctgaccgat gcccttga gaccccaacc  
 2161 cagtacgctc ctccgggtg gcgcggggca tgactatct cgcgcgactt atgactgtct  
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 2821 tgagcatcct ctctgttgc atcggtatca ttaccccat gaacagaat ccccttaca  
 2881 cggaggcatc agtgacaaa caggaaaaa ccgccccta catggcccgc ttatcagaa  
 2941 gccagacatt aacgtctcgc gagaaactca acgagctgga cgcgatgaa caggcagaca

## Figure 4 (Continued)

3001 tctgtgaatc gcttcacgac cacgctgatg agctttaccg cagctgcctc gcgcgtttcg  
 3061 gtgatgacgg tgaaaacctc tgacacatgc agctcccga gacggtcaca gcttgtctgt  
 3121 aagcggatgc cgggagcaga caagcccgtc agggcgcgtc agcgggtgtt ggcgggtgtc  
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 4201 aaacagtaat acaaggggtg ttatgagcca tatcaacgg gaaacgtctt gctctaggcc  
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### Figure 5

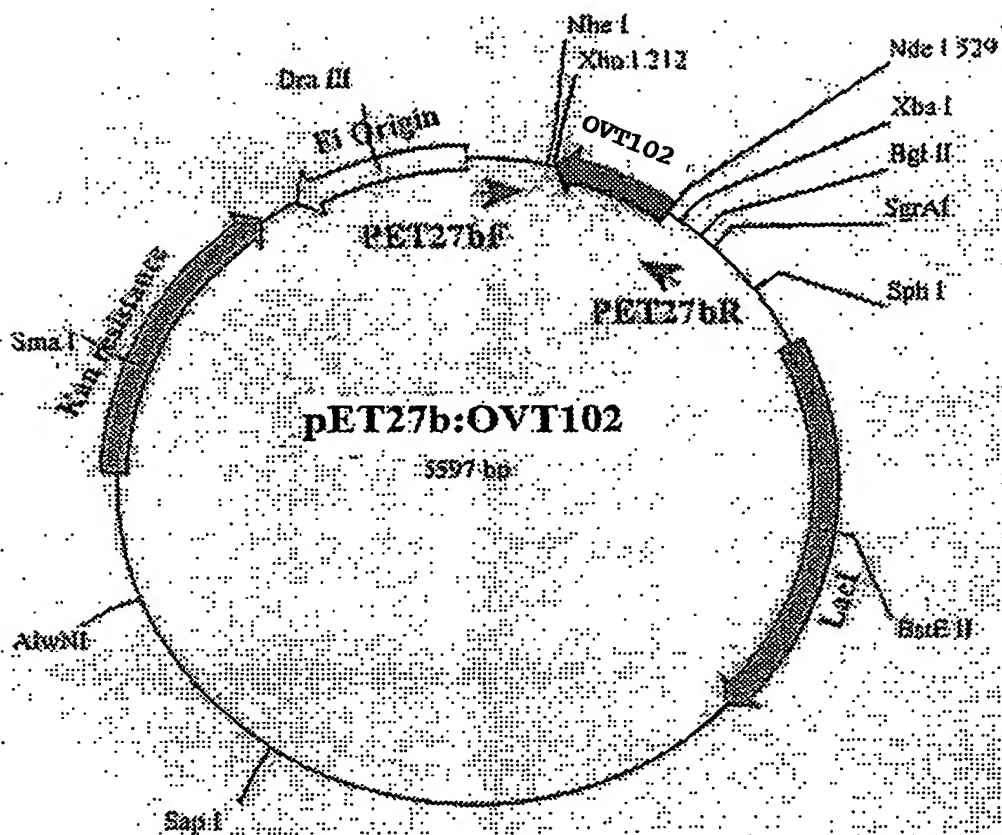


FIGURE 6



1 2 3 4 5 6 7 8 9 10 11 12

FIGURE 7

